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RECORD OF ORAL HEARING
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FANG LEI

Appeal 2008-2862
Application 10/764,908
Technology Center 2800

Oral Hearing Held: October 21, 2008

Before CHARLES F. WARREN, CATHERINE Q. TIMM, and
JEFFREY T. SMITH, Administrative Patent Judges

ON BEHALF OF THE APPELLANT:

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1 The above-entitled matter came on for hearing on Tuesday, October
2 21, 2008, commencing at 9:33 a.m., at the U.S. Patent and Trademark
3 Office, 600 Dulany Street, Alexandria, Virginia, before Dawn A. Brown,
4 Notary Public.

5 THE USHER: Calendar Number 2, Appeal Number 2008-
6 2862. Mr. Aldrich.

7 JUDGE WARREN: Good morning, Mr. Aldrich.

8 MR. ALDRICH: Good morning.

9 JUDGE WARREN: As you know, sir, you have 20 minutes to
10 present your case and you may start when ready.

11 MR. ALDRICH: Generally, I try to come down here with
12 myself available for any questions, so I'll try not to take too long in my spiel,
13 and if you have any questions for me, I'll be happy to try to answer them as
14 best as I can.

15 Generally, this invention just relates to a rod lens system for
16 endoscopes or similar instruments. And basically, it cites a number of
17 features, and this particular lens assembly that make it work as well as it
18 does and increase the image brightness. And a number of these specific
19 features aren't disclosed in the prior art cited by the examiner.

20 The first one is that there is -- there was a recitation that these
21 several rod lenses are positioned vertex-to-vertex adjacent to each other.
22 And this appears to be the crux -- the crux of that dispute appears to be
23 really a claim-construction issue.

24 The examiner has taken the position that vertex-to-vertex
25 adjacent doesn't mean that the lenses have to actually be touching each other
26 because, I guess, they could just be positioned in sequence.

1 And we think that is an unfair reading for a number of reasons.
2 You know, I suspect that the language, if we cited they were positioned end-
3 to-end, we probably wouldn't be having this discussion because everybody
4 could agree what "end-to-end" means.

5 Vertex-to-vertex is really just a little more accurate. You know,
6 I think if you had two planar ends that were, you know, kind of butting each
7 other, end-to-end would be appropriate. Here you have curved ends, so
8 vertex-to-vertex is more appropriate because that is what is touching. And I
9 think the spec bears that out. That is the meaning of that claim language in a
10 number of places.

11 First, I mean, there is not really any support for broader
12 construction on that because there is no embodiments disclosed where the
13 rod lenses are not butting each other.

14 But this also, you know, it's a central feature of the invention,
15 so, you know, this distinction is actually explicitly described in a number of
16 places. And I don't know if you have the application in front of you, but if it
17 is okay, I'd like to direct you to a couple of paragraphs.

18 JUDGE TIMM: We do have the application in front of us.

19 MR. ALDRICH: Great. There is -- you know, starting
20 paragraph 11, you know, after it gets done discussing the prior art, you
21 know, it mentions, you know, in these embodiments, this is prior art
22 embodiments we just discussed, the outer rod lenses are set at a distance
23 from the center lens, possibly by means of distancing tubes.

24 And then the next paragraph goes on to say that that along with
25 the other feature of the center lens being shorter leads to this disadvantage of
26 producing darker images. So, you know, it mentions -- specifically

1 describing this distance between the lenses being shortcoming.

2 Then it says the aim of the invention is to, therefore, improve
3 the image brightness. And goes on, you know, two paragraphs later,
4 paragraph 15, to, you know, to say that aim is met by having the rod lenses
5 positioned vertex-to-vertex adjacent to each other.

6 So I think in its description of what the shortcoming was in the
7 prior art and how it achieves it, I think that illustrates pretty clearly what is
8 meant by vertex-to-vertex adjacent.

9 It also, if you were to look at paragraph 18, it basically
10 parenthetically defines what that means. It says, The rod lenses are directly,
11 and in parentheses it says, Vertex-to-vertex.

12 JUDGE WARREN: So you don't see any necessity to put the
13 term directly into your claim?

14 MR. ALDRICH: I think either one would have worked. I think
15 it was basically parenthetically defining directly as vertex-to-vertex. I think
16 the same -- those terms are basically synonymous whether you call them
17 directly adjacent or vertex-to-vertex adjacent, if that is what that particular
18 paragraph was clarifying there in that way.

19 And, you know, there are a couple -- I think those are the
20 clearest examples. There are a couple of other sections, paragraphs, in the
21 specification that, you know, make similar illustrations of what is in that
22 paragraph, paragraph 23.

23 And paragraph 28, the same type of thing. They talk about the
24 same type of thing. They talk about because they're positioned vertex-to-
25 vertex adjacent; therefore, you don't need distancing tubes, or therefore, you
26 know, providing that distance would be superfluous.

1 So I believe it is pretty clear both from the -- well, it is talking
2 about how it stems from the prior art and how it essentially defines in these
3 different paragraphs that -- you know, I think it is pretty much an unfairly
4 broad reading. And I think if you gave it the proper reading, the examiner
5 has basically acknowledged the reference doesn't disclose that.

6 Another recitation that was not in the prior art and that was -- or
7 not in the primary reference was that the center rod lens -- typically, in the
8 prior art, the center rod lens, at least these types of arrangements, is
9 significantly shorter than the outer rod lenses.

10 And the primary reference cited by the examiner is like most of
11 the prior art in that the center rod lens is shorter, and it doesn't disclose one
12 that is the same length as the outer rod lenses are longer.

13 But the examiner goes to the secondary reference. And, you
14 know, our original appeal brief had a lot of language about no explicit --
15 there was no explicit suggestion or motivation.

16 And of course, KSR has come down since then. But I think this
17 still has the same fundamental problem. It is just that the examiner hasn't
18 provided any reason why you make this -- why you would go to the second
19 reference.

20 And the second reference -- also most of the -- it is basically a
21 library. It is a very big reference. And it is a library of many, many
22 different types of lenses and lens assemblies. And most of the ones it
23 discloses are like the prior art where the center lens is shorter than the outer
24 rod lenses. A couple of assemblies where the center rod lens is --

25 JUDGE WARREN: So why should we ignore the showing in
26 the reference that the center rod lens can be essentially equal to or greater in

1 length than the outer rods?

2 MR. ALDRICH: Because I don't think there is any teaching or
3 not even any -- I would say explicit teaching, but I don't see any reason why
4 someone skilled in the art would go to the second reference which has a
5 library of -- basically, has a library of all different sorts of lenses and pick
6 out these couple of particular ones that have the center lens.

7 JUDGE WARREN: The reference says they work.

8 MR. ALDRICH: Well, it says they work for, you know -- it
9 shows them in a couple of particular lens assemblies, not in a particular lens
10 assembly that is a main piece of prior art that is being cited against us that
11 has these particular --

12 JUDGE WARREN: Well, doesn't it have a rod structure that is
13 similar to yours?

14 MR. ALDRICH: Yes, it does have a rod structure that is
15 similar, but it is missing other -- those particular examples that they've cited
16 are missing some of the claimed features.

17 JUDGE WARREN: What claimed features are they missing?

18 MR. ALDRICH: I'm sorry?

19 JUDGE WARREN: What claimed features are they missing?

20 MR. ALDRICH: This secondary reference actually was
21 originally used as a primary reference, and we had appealed that, too,
22 because it was missing some of the features and that was withdrawn.

23 That was some time ago so I don't remember -- well, I could tell
24 you at least one of the -- one of the features was that, you know -- a basic
25 aspect of this particular lens system was that all of the optically active
26 surfaces are spherical, and that is not disclosed in the second. This lens

1 assembly is different.

2 JUDGE WARREN: Well, if we look at figure 20 of the
3 secondary reference.

4 MR. ALDRICH: Uh-huh.

5 JUDGE WARREN: Which members of the systems 52A, B
6 and C in your view would not be spherical?

7 MR. ALDRICH: As you can see, there are two planar -- the
8 center lens has two planar-convex lenses on its ends.

9 JUDGE WARREN: And yours doesn't?

10 MR. ALDRICH: No, not a planar-convex lens. The one side
11 of each of those lenses is planar, and therefore, so is the center element
12 between those two end pieces that also has planar lens.

13 JUDGE WARREN: But all you require is just a lens element
14 connected to your center rod that result in a biconvex arrangement, doesn't
15 it?

16 MR. ALDRICH: In our claims?

17 JUDGE WARREN: In fact, I think that is also shown in the
18 primary reference.

19 MR. ALDRICH: I'm sorry?

20 JUDGE WARREN: The primary reference also has spherical
21 surfaces.

22 MR. ALDRICH: That is right. The primary reference does.
23 That is basically --

24 JUDGE WARREN: So why isn't figure 20 -- the rod systems
25 in figure 20 spherical?

26 MR. ALDRICH: In the secondary reference in figure 20?

1 JUDGE WARREN: Correct.

2 MR. ALDRICH: I guess I'm not sure if I understand the
3 question. The --

4 JUDGE WARREN: You were saying that you have all the --
5 doesn't have all the elements of claim 1, and one of the things that you said
6 was that all optically active surfaces are spherical.

7 MR. ALDRICH: Right.

8 JUDGE WARREN: And we're asking you to distinguish that
9 particular claim element from figure 20 in the secondary reference.

10 MR. ALDRICH: In claim 1 it is the second recited element
11 where it says all optically active surfaces are spherical. And then in figure
12 20 of the secondary reference, it shows, basically, if you were to look at the
13 top series of three-rod lenses in figure 20.

14 JUDGE WARREN: 52A?

15 MR. ALDRICH: Correct, 52A. Sorry.

16 JUDGE WARREN: Okay.

17 MR. ALDRICH: 52A. The middle rod lens, which in total,
18 you know, the entire thing is biconvex. It has multiple surfaces.

19 JUDGE WARREN: Okay.

20 MR. ALDRICH: All right. Multiple optically active surfaces
21 within that lens. And two of those surfaces are planar. It is the two surfaces
22 that connect the middle element and the two planar convex -- small planar-
23 convex pieces attached on the ends of it.

24 JUDGE WARREN: Okay. So when you're saying that all
25 optically active surfaces, you're also talking about the center rod main
26 element as well as the lens element cemented to it?

1 MR. ALDRICH: That is right. And that is just -- you know, to
2 be honest, I can't remember what other features that this one didn't have if
3 there were other features, but I guess my point was that as a secondary
4 reference, it -- although there were a couple of embodiments where it
5 disclosed this center -- this longer center rod lens, it is disclosing it in, you
6 know, in a lens assembly that is different from the present invention and it is
7 different from the thing in the primary reference that is being cited.

8 And it is not, you know, a situation where we're going to this
9 secondary reference that has a lot of stuff in it and picking and choosing
10 particular pieces out of different lens assemblies that are different than this
11 one.

12 And, you know, the secondary reference, which has tons of
13 stuff in it, really does not have any teaching and really does not give
14 someone skilled in the art a reason to use this particular rod lens length in
15 the specific assembly that we claimed and that was being cited in the
16 primary reference, particularly when this reference teaches -- the secondary
17 reference teaches many, many embodiments, most of which use the standard
18 shorter stem rod length.

19 I guess the last thing which actually was -- you know,
20 admittedly was not in our original appeal brief, but then in the examiner's
21 answer, the examiner attached a full translation of the reference, and so now
22 we see that, which we mentioned in our reply brief just to raise the issue, is
23 that now seeing the translation, it is also missing the element -- that the lens
24 elements are all actively homogeneous.

25 Because this reference, looking at the translation, it pretty
26 clearly teaches to use lenses that have different indexes of refraction. It

1 discusses it and even claims it in one of its two claims, which is --

2 JUDGE WARREN: Counselor, your claimed element there
3 says all lens elements in each case have optically homogeneous material.

4 MR. ALDRICH: I'm sorry? I'm having trouble hearing.

5 JUDGE WARREN: Essentially, your first clause following
6 your preambular language in claim 1 indicates that in each case the material
7 is optically homogeneous material. Can't each rod be optically
8 homogeneous and still have a different refractive index than the next
9 adjacent rod?

10 MR. ALDRICH: Okay. So the elements of a particular rod
11 lens would all be optically homogeneous within that lens?

12 JUDGE WARREN: It would appear to be so.

13 MR. ALDRICH: That is a good point. Give me one minute. If
14 I can just take a quick glance at the reference.

15 I think that the -- if you were to look at the translation of claim
16 2 in the -- I don't know if you have the translation.

17 JUDGE WARREN: Of course.

18 MR. ALDRICH: Okay. It says, Characterizing the two lenses
19 that sandwich the bonding surface between them. So I'm not -- again, I
20 guess I haven't studied this aspect of it in detail, but that would seem to me
21 to be referring to, you know, the lenses within a particular rod lens, the
22 elements cemented together. I assume that is what they mean, "bonding
23 surface."

24 JUDGE WARREN: Well, the whole rod -- could not the whole
25 rod be actively homogeneous and then the next rod be actively homogeneous
26 even though the two have a different refractive index?

1 MR. ALDRICH: I understand. I think when it -- I suspect
2 when it is talking about bonding surface, I think that is referring to within a
3 single rod lens because I think the bonding surface, I think that would mean
4 where you have, you know, typically -- just considering one rod, it is going
5 to have several elements, and those elements are going to be cemented
6 together.

7 I assume that is what it means by the bonding surface. So it
8 sounds to me that the individual pieces of a rod would have different
9 refractive index.

10 JUDGE WARREN: It just says, all lens elements.

11 MR. ALDRICH: I'm sorry?

12 JUDGE WARREN: It just says, all lens elements, and then the
13 third clause, the center rod lens consists of a rod lens main element and lens
14 elements cemented to it. So if we're just looking at all lens elements in each
15 case, homogeneous material, actively homogeneous.

16 MR. ALDRICH: I'm sorry. I'm not sure where you're looking
17 at.

18 JUDGE WARREN: In your claim 1.

19 MR. ALDRICH: Oh, yes.

20 JUDGE WARREN: The elements -- the term "element" does
21 not refer to a rod but to all parts of the rod and, in fact, the rod lenses, for
22 example, are vertex-to-vertex adjacent to one another.

23 And when you look at your figures, it would appear that even
24 the outer rod lenses have elements. So it is just not the center rod that would
25 have essentially three claimed elements, that the outer rods could have three
26 elements as well.

1 MR. ALDRICH: Yeah, I do agree with that. But I guess I -- I
2 guess -- in the end, I guess, the examiner has -- ultimately, I mean, the
3 examiner has just cited that this primary reference teaches optically
4 homogeneous substances and hasn't pointed to where in the reference it says
5 that.

6 I mean, I don't see that in the reference period. To me, it seems
7 to teach against it, and I think it even teaches against what you are talking
8 about within a single rod.

9 JUDGE WARREN: Of course, when you put it in your reply
10 brief, it will wind up in our lap instead of being addressed by the examiner.

11 MR. ALDRICH: Sure. I understand. We didn't have a full
12 translation until then, so that is when we noticed. So I appreciate what
13 you're saying.

14 JUDGE WARREN: Any further questions?

15 JUDGE TIMM: No questions.

16 JUDGE SMITH: No questions.

17 JUDGE WARREN: Thank you very much, Counselor.

18 MR. ALDRICH: Thank you very much for your time.

19 JUDGE WARREN: You have a good day.

20 Whereupon, the proceedings at 9:54 a.m. were concluded.

21